

# What Makes WACAP Work?? : The Academic Perspective....

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**“Collaborative Science for Environmental Solutions”**

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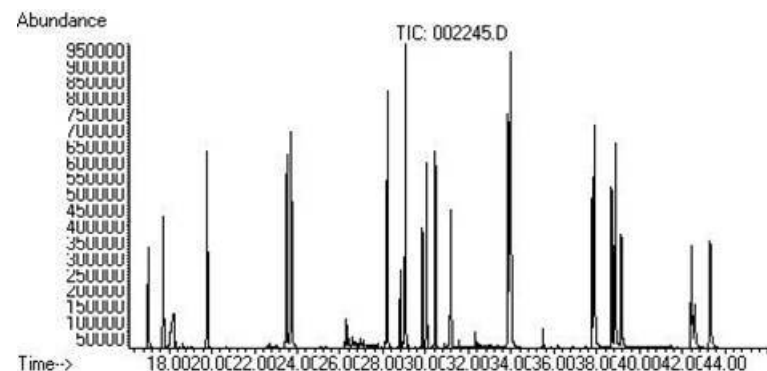
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# Simonich Environmental Chemistry Laboratory WACAP Responsibilities

- Measurement and environmental chemistry of Persistent Organic Pollutants (POPs) and other anthropogenic semi-volatile organic pollutants (SOCs) in snow, lake water, sediment, fish, vegetation, and moose
- Development and validation of new analytical methods
- Analysis of 800+ samples for 120+ analytes
- Quality Assurance
- Assistance in field sampling
- Interpretation of data
- Publication and presentation of results



# The Secrets to Success:

## The Right People at the Right Time

- Multi-disciplinary team
- 'Hungry' but experienced and credible PIs.....
- Research topic synergistic
- Flexibility in overseeing personnel and timing
- Experienced technicians at the right time
- Post-doctoral researcher at the right time
- Experienced undergraduate researchers



# The Secrets to Success:

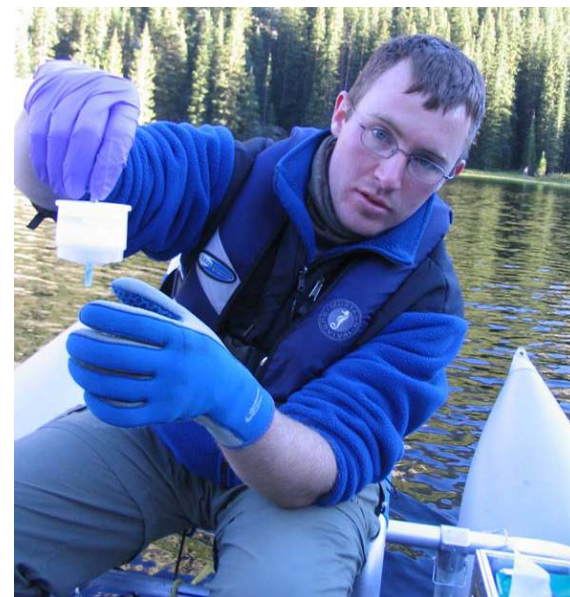
## \$\$Funding!\$\$

- Funding prioritized but consistent and reliable
- Five years of funding
- Low negotiated overhead rate
- In-kind contributions
- Additional funding sources
- Stretching each \$ to the max.....



# The Secrets to Success: Some Freedom to Innovate

- Strict control of “mission creep”
- Development and publication of new methods
- New analytes – not just the same old POPs (current use pesticides, PBDEs, PFOS, etc.)
- Interpretation of data – not just number generators.....
- High quality publications are our bread 'n butter





# The Secrets to Success:

## Quality Assurance

- USEPA approved Quality Assurance Project Plan
- USEPA Quality Assurance audit of laboratory
- Must be reasonable and logical to be accepted
- Good training for students (and PI)!
- Guidelines for all research being conducted in lab (not just WACAP research).....



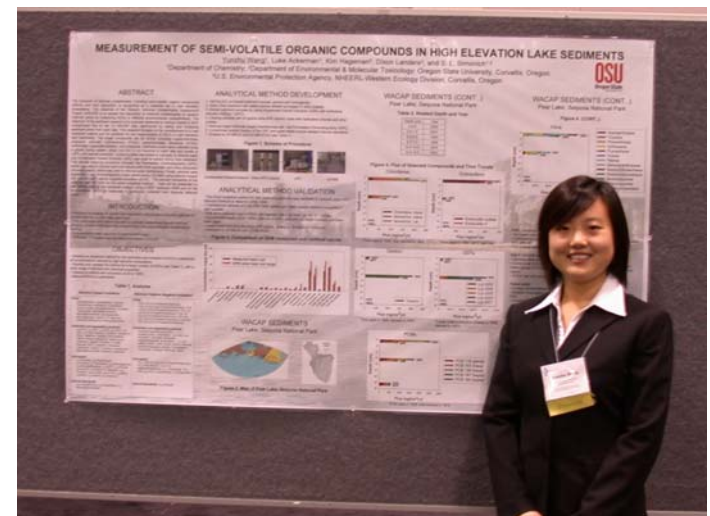
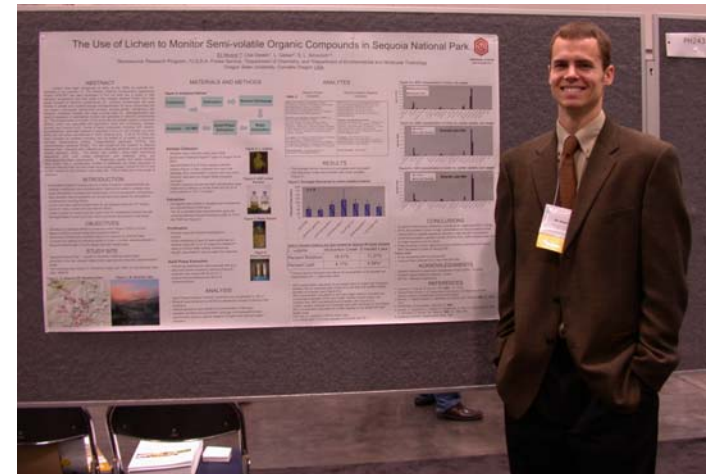
# The Secrets to Success:

## Publications and Presentations

By the end of 2005\*:

- 30+ WACAP presentations
- 14+ national and international conferences
- 6+ WACAP publications in top journals

\* WACAP doesn't end until 2007



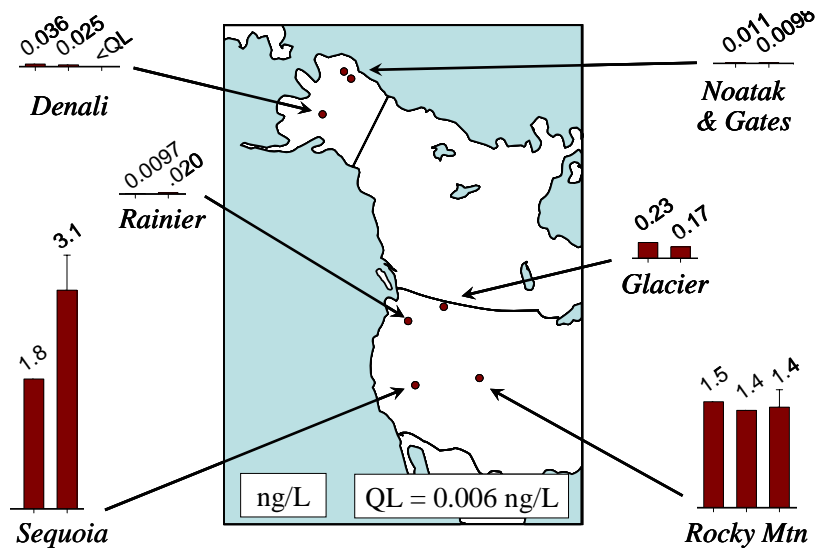
## Other Secrets to Success:

- The training of students (4 undergraduate students, 4 graduate students, and 1 post-doc)
- Wide range of experience levels (20 – 60 years old) working together for a common goal
- Field experience as well as laboratory experience
- Frequent communication among PIs, project lead, and NPS

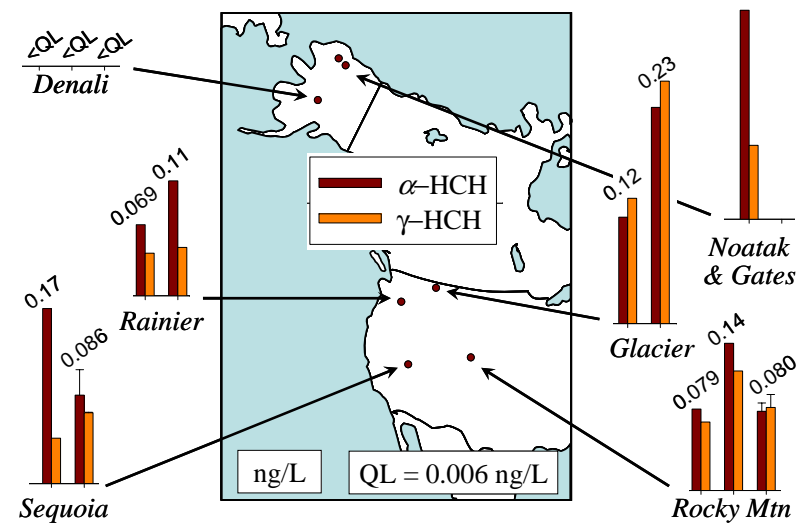




# Atmospheric Deposition of SOC in Snow

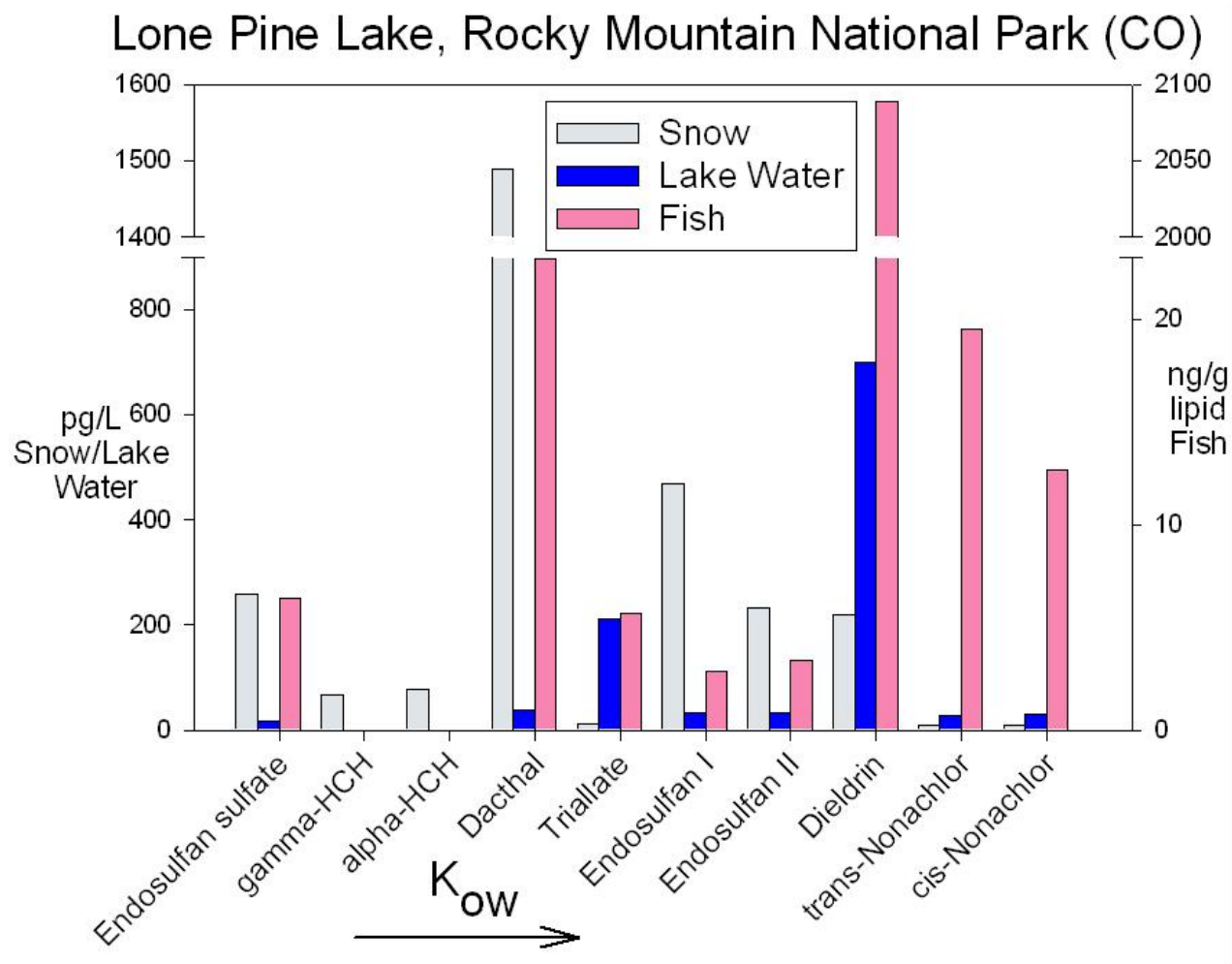


Dacthal  
Current Use Pesticide



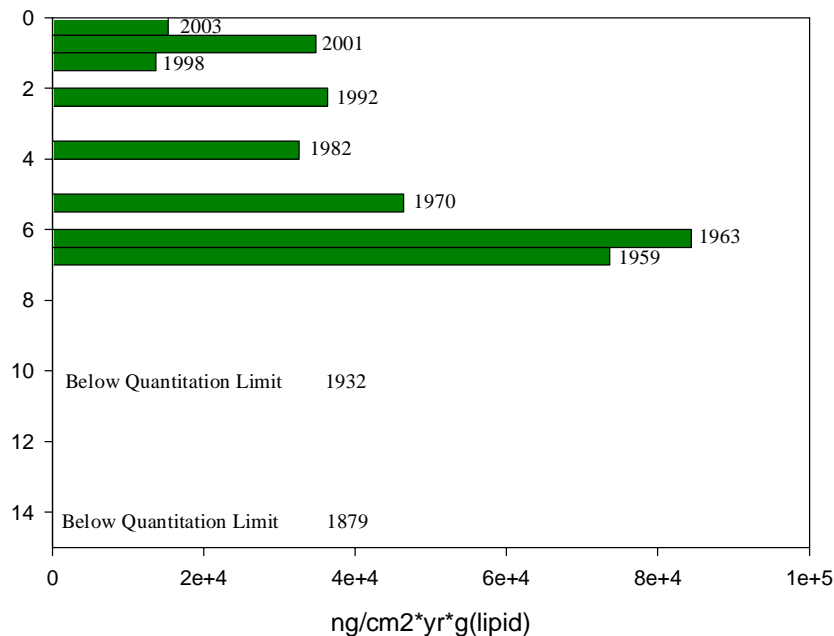
Hexachlorocyclohexanes (Lindane)  
Historical Use Pesticide

# Transfer of SOC's Through Ecosystem



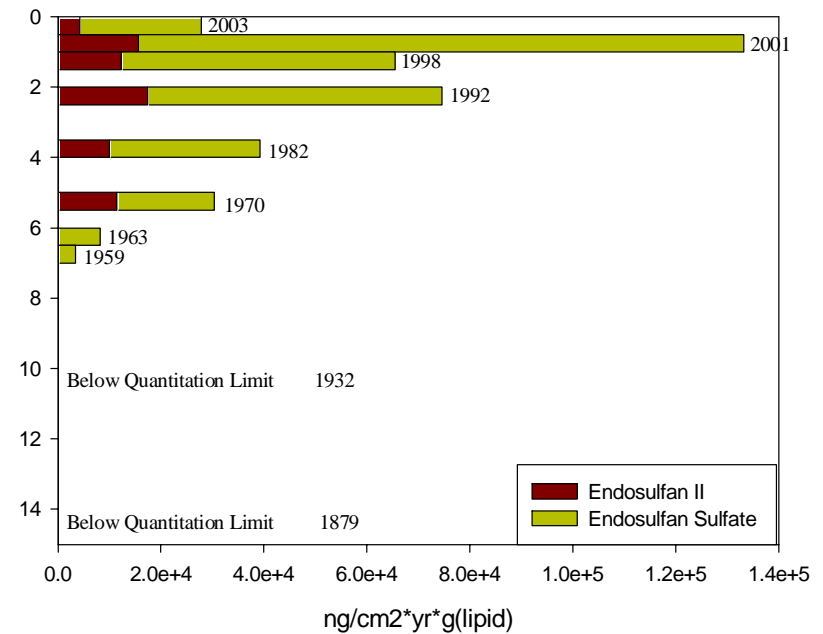
# Historical Deposition of SOC<sub>s</sub>

## Pear Lake Sediment, Sequoia National Park



Dieldrin

First Used 1948, Banned 1974



Endosulfan

First Used 1956, Still in Use

# Conclusions

- Select your academic partner wisely
- Expect great things from your academic partner (including QA, timeliness, innovation and high profile publications)
- Reward, value, and recognize your academic partner
- Non-financial rewards are also valued and appreciated!

